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Samuel H. Dworetsky
AT&T CORP.
P.O. Box 4110
Middletown, NJ 07748-4110

EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/010,682	CHU ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44,47 and 48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *47 and 48* is/are allowed.

6)☒ Claim(s) *1-26,28-37,40,41 and 43* is/are rejected.

7)☐ Claim(s) *27,38,39,42 and 44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Drawings

2. The drawings are objected to because Fig.2, the connecting arrowed lines between the elements (200, 205, 206, 207, 210) are not labeled and not described in the disclosure, and Fig.3, the connecting arrowed lines between the elements (301, 305, 308, 315) are not labeled and not described in the disclosure. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

- With regard to the specification, paragraph 7 of page 2, there is inconsistency in the disclosure. For example, quoted from the specification "a Software Radio Port that functions as a radio base station and a VoIP gateway, a VoIP call-Server that manages the call processing for VoIp calls". While Figure 2 indicates Software Radio Port (SRP) showing element 200 (Air Interface), element 205 (VOIP Media Gateway), element 206 (Call Control & OAM), element 207 (VoIP Signaling Gateway), and element 210 (IP/Ethernet Interface) loosely connected by the arrowed connecting lines. The arrowed connecting lines are not labeled and functions. While regarding Figure 1, element 11, VoIP Call-Server is a standalone entity.
- With regard to the specification, page 6, paragraphs [28], [29], [30], the disclosure describes Fig. 2 the functional block diagram of SRP 15, however, the seven connecting arrowed lines coupling between the elements 205 and 210, between elements 200 and 205, between elements 200 and 206, between elements 206 and 210, between elements 205 and 206, between elements 206 and 207, between elements 207 and 210 are not labeled. Theyare not described and disclosed in the specification. It is not sure how the elements 205, 206 and 207 interact with each other. The function block diagram does not indicate clearly whether the elements 205, 206 and 207 are line-cards or separate modules or just node infrastructure loosely defined and coupled together by lines.

- With regard to the specification, page 6 and 7, paragraphs [31], [32], [33], the disclosure describes a block diagram of Network Server Platform; however, the four connecting arrowed lines coupling amongst elements 301, 305, 308 and 315 are not labeled and their functions are not described. The current block diagram does not provide and define clearly whether the NSP is one system. That is NSP comprising separate entities (elements 310, 305, 308, and 315) are system/line-cards mounted on the motherboard within the system connecting by buses or all the entities are separate units interconnecting by cables.

Appropriate correction is required.

Claim Objections

4. Claim 13 is objected to because of the following informalities:

Regarding claim 13, it is not clear whether the claim is claimed as a dependent claim or it is claimed as an independent claim. Claim 13 defines as network and it depends on claim 1, while claim 1 declares as apparatus. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite and unclear for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The reason is the claim is not clear whether the claim is in

dependent form or in independent form, since claim 1 is defined as apparatus, while claim 13 is defined as a network that depends on claim 1.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **1**, 2, 3, 13, **15**, 16, 17, 18, 28, 19, 37, 26, 20, 29, 21, 30, 22, 31, 23, 32, 24, 33, **25**, **34**, 35, 36, 40, 41, 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Chow et al. (US 7010002 B2).

Regarding claim 1, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47), the device comprising: an air interface (recited "IEEE 802.11b wireless interface and multichannel software radio interface for wireless data and voice communication" as air interface, column 21, lines 26 – 32); an IP/Ethernet Interface (recited "Ethernet interface' as IP/Ethernet Interface, column 21, line 23); a VoIP Media Gateway interposed between the air interface and the IP/Ethernet Interface for media conversion and transportation (recited "VoIP/Ethernet Processor" as VoIP Media Gateway, column 22, lines 28 – 33); a VoIP signaling Gateway for controlling VoIP call processing (recited "main CPU" as VoIP signaling Gateway, column 22, lines 19 – 26); and, a Call Control for controlling call processing of wireless terminals and

coordinating with VoIP call processing (recited "executing the desired radio protocol" as Call Control for controlling call processing, and DSPs as Call control, column 22, lines 4 – 12).

Regarding claim 2, Chow et al. discloses the limitation of the device of claimed wherein the air interface receives signaling messages and a voice stream from a mobile station (recited "message exchange for basic on-net voice calls between a TIA/EIA-136 MS and a laptop" as air interface (TIA/EIA-136 as air interface)", column 14, lines17 – 20).

Regarding claim 3, Chow et al. discloses the limitation of (Original) The device of claim I wherein the mobile station receives signaling messages and a voice stream from the air interface(recited "message exchange for basic on-net voice calls between a TIA/EIA-136 MS and a laptop" as MS (MS as mobile station)", column 14, lines17 – 20).

Regarding claim 13, Chow et al. disclose the limitation of a wireless telecommunication system (Fig. 1) for providing VoIP service to wireless terminals comprising: a software radio port device according to claim 1 (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47); a network server platform (Fig. 1, element 108 Network Server Platform (NSP); column 8, lines 57 – 67); a VoIP-enabled communication device (recited "network server" as VoIP-enabled communication device; column 9, lines 30 – 31); a VoIP proxy server for managing requests/messages from the VoIP-enabled communication device (recited "PSTN Media gateway Controller" as VoIP-enabled communication device; column 9, lines 32 – 36); and a PSTN/VoIP Gateway for

interconnecting a VoIP network with Public Switched Telephone Network (PSTN) (recited "PSTN Gateway" as PSTN/VoIP Gateway; Fig. 6, column 9, lines 3 – 7).

Regarding claim 15, Chow et al. discloses the limitation of a method of providing a two-way voice path between a VoIP device in a network and a mobile station (recited "voice path is established in both direction" as two-way path, column 14, lines 10 –11) wherein a call originates at the mobile station (Fig 3, element "Lto" Originating Laptop" as mobile station), the method comprising: initiating mobile call set-up (recited "generating an INVITE (no-ring) message" as initiating a mobile call set-up, Fig. 3, element 301, column 13, lines 35 – 37); tuning the mobile station to digital traffic channel (DTC) to establish a voice path over the air via a Software Radio Port (SRP) (recited "radiates a digital "setup" channel signal", column 10, lines 22 – 25; recited " allocated RF traffic channel via the Digital Traffic Channel" as tuning the mobile station to digital traffic channel (DTC), column 14, lines 50 – 52, 56 – 57); engaging a VoIP call-server to set up a VoIP call (Fig. 4, column 14, lines 58 – 62); generating a ringback tone to the mobile station (recited "ringback tone" as ringback tone; Fig. 4; column 14, lines 63 – 67); establishing an RTP media path for exchange of RTP data packets via said Software Radio Port (SRP) (recited "the TIA/EIA-136 voice packets to RTP packets of encoded voice and sends them to LTt . The voice path is established in both direction"; Fig. 4, elements 412 ACK, Voice Path, column 15, lines 6 – 15); and interconnecting the voice path over the air and the RTP path over the packet network via said Software Radio Port (SRP) (recited "the TIA/EIA-136 voice packets to RTP packets of encoded voice and sends them to LTt. The voice path is established in both direction" and sends a Connect message to the NSP "; Fig. 4, elements 412 ACK, Voice Path, 413 connect, column 15, lines 6 – 17).

Regarding claim 16, Chow et al. disclose the limitation of a method of claimed wherein the VoIP device comprises at least one of a VoIP phone or a VoIP Gateway (Fig. 1, element 114, IP Phone).

Regarding claim 17, Chow et al. disclose the limitation of a method of claimed wherein the step of initiating mobile call set-up comprises receiving a call origination message from the mobile station (recited "generating an INVITE (no-ring) message" as initiating a mobile call set-up, Fig. 3, element 301, column 13, lines 35 – 37) and engaging the NSP to set up a mobile call (recited "the mobile station (MS) and laptop registration procedures to the network (NSP), Fig. 4, column 14, lines 25 – 27, column 15, lines 16 – 17).

Regarding claims 18, 28, Chow et al. disclose the limitation of a method of claimed wherein said step of tuning comprises: sending a message to tune the mobile station to a specified digital traffic channel (recited "AP allocates RF resource to the Ms and inform MS of the allocated RF resource via the DTC" as sending a message to tune the mobile station to a specified digital traffic channel; column 14, lines 50 – 52); and detecting the mobile station as being tuned to the specified digital traffic channel (column 14, lines 56 – 57).

Regarding claims 19, 26, 37, Chow et al. disclose the limitation of a method of claimed wherein said step of engaging comprises: sending a VoIP call connection request to the VoIP call-server (recited "INVITE (no-ring)" as VoIP call connection request; Fig. 3, column 13, lines 35 – 37); analyzing a called number (recited "registers and authenticates/authorizes" as

analyzing a called number; column 13, lines 38 –40); and setting up a VoIP call via the VoIP call-server (column 13, lines 44 – 52).

Regarding claims 20, 29, Chow et al. disclose the limitation of a method of claimed wherein said step of generating comprises: receiving a ringing indication from the called party (Fig. 3, element 307, 180 ringing; column 13, lines 62 – 66); generating a ringback tone in response to said receiving (recited "generate RINGING" as generating a ringback tone; column 13, lines 62 – 66); and transmitting the ringback tone to the mobile station (recited "sends a 180 RINGING message to Lto (Sending Mobile station)" as transmitting the ringback tone to the mobile station; column 13, lines 62 – 66).

Regarding claims 21, 30, Chow et al. disclose the limitation of a method of claimed wherein said step of establishing comprises: receiving a connect indication from the called party (recited "LTt sends a 200 OK message to Lto" as receiving a connect indication from the called party; column 14, lines 1 – 2); turning off the ringback tone (recited "in the original INVITE (no-ring) message" as turning off the ringback tone; column 14, lines 2 – 5); setting up an RTP media path for exchange of-RTP data packets (column 14, lines 7 – 11); and informing the NSP of the call connection (column 14, lines 11 – 12).

Regarding claims 22, 31, Chow et al. disclose the limitation of a method of claimed wherein said step of interconnecting comprises: converting received voice frames to RTP packets to be sent to the packet network (column 15, lines 7 – 9), and converting received RTP packets to voice frames to be sent to the mobile station (column 15, lines 9 – 14).

Regarding claims 23, 32, Chow et al. disclose the limitation of a method of claimed wherein the network is a Public Switched Telephone Network (PSTN) (Fig. 1, element 128; column 9, lines 8 – 10).

Regarding claim 24, 33, Chow et al. disclose the limitation of a he method of claimed wherein the network is a Private Branch Exchange (PBX) (Fig. 1, element 110 PBX; column 9, lines 21 – 29).

Regarding claims 25, 34, Chow et al. disclose the limitation of a method of providing a two-way voice path between a first mobile station and a second mobile station wherein the first mobile station is associated with a first Software Radio Port (SRP) and the second mobile station is associated with a second SRP ((recited "voice path is established in both direction" as two-way path, column 14, lines 10 –11) and wherein a call originates at the first mobile station (Fig 3, element "Lto" Originating Laptop" as mobile station), the method comprising: initiating call set-up for the first mobile station at the first SRP (recited "generating an INVITE (no-ring) message" as initiating a mobile call set-up, Fig. 4, element 401, column 14, lines 30 – 33); tuning the first mobile station to a digital traffic channel (DTC) via the first SRP to establish a voice path over the air (recited "radiates a digital "setup" channel signal", column 10, lines 22 – 25; recited " allocated RF traffic channel via the Digital Traffic Channel" as tuning the mobile station to digital traffic channel (DTC), column 14, lines 50 – 52, 56 – 57); engaging a VoIP call-server to set up a VoIP call via the first SRP (Fig. 4, column 14, lines 58 – 62); initiating mobile call set-up for the second mobile station via a Network Server Platform (NSP) (recited

"generating an INVITE (no-ring) message" as initiating a mobile call set-up, Fig. 4, element 403, column 14, lines 36 – 40); tuning the second mobile station to a digital traffic channel (DTC) via the second SRP to establish a voice path over the air (This call flow and setup the air interface is the same as calling end setup, just the call flow is in reverse direction; there recited "radiates a digital "setup" channel signal", column 10, lines 22 – 25; recited " allocated RF traffic channel via the Digital Traffic Channel" as tuning the mobile station to digital traffic channel (DTC), column 14, lines 50 – 52, 56 – 57); alerting the first mobile station and the second mobile station via the second SRP (Fig. 4, elements 409 INVITE (RING) as alerting the second mobile station (LTt), and elements 410 180 RINGING alerting the first mobile station (MS) via NSP and Aps; column 14, lines 58 – 67); generating a ringback tone to the first mobile station via the first SRP (Fig. 4, element "RINGBACK TONE between MS and AP; column 14, lines 66 – 67); establishing an RTP media path for exchange of RTP data packets (recited "begins to generate RTP packets for encoded voice" as establishing an RTP media path; column 15, lines 1 – 5); interconnecting a voice path between the first SRP and the first mobile station and an RTP path over the packet network ; and, interconnecting a voice path between the second SRP and second mobile station and an RTP path over the packet network (recited "the voice path is established in both directions" as interconnecting a voice path between the first SRP and the first mobile station and an RTP path over the packet network ; and, interconnecting a voice path between the second SRP and second mobile station and an RTP path over the packet network ; Fig. 4, element "VOICE PATH" indicates an end-to-end RTP packet of voice path has been established between the first mobile station and second mobile station via first and second SRPs; column 15, lines 6 – 17).

Regarding claim 35, Chow et al. disclose the limitation of a method of claimed wherein the step of initiating call set-up for the first mobile station at the first SRP (recited "MS sends a TIA/EIA –136 Origination message" as initiating call setup; Fig. 4, column 14, lines 30 – 33) comprises receiving a call origination message from the first mobile station and engaging the NSP to set up a mobile call (recited "AP in turn generates an INVITE 9no-ring) message and sends it to NSP" as engaging the NSP to set up a call; Fig. 4, element 402, column 14, lines 34 – 35).

Regarding claim 36, Chow et al. disclose the limitation of a (Currently amended) The method of claim 33 34 wherein said step of tuning the first mobile station to a digital traffic channel (DTC) via the first SRP (recited "allocates RF resources to the MS and informs the MS of allocated RF traffic channel via DTC" as tuning the first mobile station to a digital traffic channel; Fig. 4, column 14, lines 50 – 52) comprises: sending a message to tune the first mobile station to a specified digital traffic channel (recited "via MS on DTC notification" as sending a message to tune the first mobile station; column 14, lines 56 – 57); and detecting the first mobile station as being tuned to the digital traffic channel (column 14, lines 56 – 56).

Regarding claim 40, Chow et al. disclose the limitation of a method of claimed wherein said step of alerting the first mobile station and the second mobile station (Fig. 4, elements 409 INVITE (RING) as alerting the second mobile station (LTt), and elements 410 180 RINGING alerting the first mobile station (MS) via NSP and Aps; column 14, lines 58 – 67) comprises: sending a message to the second mobile station for alerting a user (recited "403 INVITE (NO-RING)" as sending a message to the second mobile station; column 14, lines 36

– 40); and sending a ringing indication to the first SRP via the VoIP call-server (Fig. 4, element 410 180 RINGING; column 14, lines 63 – 67).

Regarding claim 41, Chow et al. disclose the limitation of a method of claim 32 34 wherein said step of generating a ringback tone to the first mobile station via the first SRP (Fig. 4, element RINGBACK TONE between MS and AP; column 14, lines 63 – 67) comprises: receiving a ringing indication from the called party (Fig. 4, element 410 180 RINGING); generating a ringback tone in response to said receiving (Fig. 4, element RINGBACK TONE between MS and AP; column 14, lines 63 – 67); and transmitting the ringback tone to the first mobile station (Fig. 4, element 410 180 RINGING; column 14, lines 63 – 67).

Regarding claim 43, Chow et al. disclose the limitation of a method of claimed wherein said step of interconnecting a voice path between the first SRP and the first mobile station and an RTP path **over the packet** network (recited "voice path is established in both direction" as two-way path, Fig. 4, element VOICE PATH; column 14, lines 10 –11) comprises: converting received voice frames from the first mobile station to RTP packets to be sent to the packet network (recited "begins to generate RTP packet of encoded voice" as converting received voice frames; column 15, lines 1 – 5); and converting received RTP packets to voice frames to be sent to the first mobile station (recited "AP transcodes the RTP stream received from LTt to the TIA/EIA-136 coding scheme" as converting received RTP packets to voice frames to be sent; column 15, lines 6 – 17).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow et al. (US 7010002 B2) in view of Vo et al. (US 6795444 B1).

Regarding Claim 4, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47), Chow et al. teach Call Control and RTP. However, Chow et al. do not disclose explicitly wherein the Call Control is configured for receiving signaling messages from the air interface; instructing the VoIP Media Gateway to set up RTP paths to the called parties; and, instructing the VoIP Signaling Gateway to set up VoIP calls to the called parties. Vo et at. disclose the limitation of wherein the Call Control (recited " CCF 206" as call control; Fig. 2A, element 206, column 14, lines 44 – 47) is configured for: receiving signaling messages from the air interface (recited "ANSI-136" as receiving signaling from air interface; Fig. 2A, element 298, column 12, lines 1-7); instructing the VoIP Media Gateway to set up RTP paths to the called parties (Fig. 11 elements 1506 and 1508, column 25, lines 52-56. Refer to Call Setup message between GW-11 and GW-2. Vo et al. discloses a wireless Internet Protocol (WLIP) network system, having a Circuit Switched Network (CSN) wireless portion and a Packet-Switched Network (PSN) VoIP portion (column 9, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include wherein the Call Control is configured for receiving signaling messages from the air interface;

instructing the VoIP Media Gateway to set up RTP paths to the called parties; and, instructing the VoIP Signaling Gateway to set up VoIP calls to the called parties such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 5, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. do not disclose explicitly wherein the VoIP Signaling Gateway is configured for receiving messages from the Call Control; processing messages from the Call Control; and, managing VoIP call-related activities. Vo et at. Disclose the limitation of wherein the VoIP Signaling Gateway is configured for receiving messages from the Call Control; processing messages from the Call Control; and, managing VoIP call-related activities (Fig. 2A, element 299B, 206, 1188, 221 and 122, column 12, lines 18-21, lines 28-30. The Call Control (206) is connected to the IWF (118B) receiving and processing messages from the Call Control. The GW-VLR entity 221 has the functions of the Mobility Gateway (Signaling Gateway, see Fig. 2B elements 13 and 120) which handles signaling information between the circuit switched network and packet switched network and has a Visitor Location Register (VLR) for maintaining visiting mobile terminal location information. The VoIP entity 122 handles the VoIP traffic (signaling + user data (voice or otherwise)) with one or more associated servers provided in the PSN infrastructures). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include wherein the VoIP

Signaling Gateway is configured for receiving messages from the Call Control; processing messages from the Call Control; and, managing VoIP call-related activities such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 6, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. teach RTP/RTCP packets (column 9, lines 65 –67, column 10, lines 1 – 13). However, Chow et al. do not disclose explicitly wherein the VoIP Media Gateway is configured for: receiving messages from the Call Control; processing messages from the Call Control; receiving the voice stream from the air interface; and packetizing the voice stream into RTP data packets. Vo et al. disclose the limitation of wherein the VoIP Media Gateway is configured for: receiving messages from the Call Control; processing messages from the Call Control; receiving the voice stream from the air interface; and packetizing the voice stream into RTP data packets. (Fig. 2C, col 15 lines 39-41, Fig. 2A, elements 299B, 206, 118B, col 12, lines 18-21, lines 23-25. The Call Control (206) is connected to the IWF (118B) which receives and processes messages from the Call Control. Fig. 2C shows a gateway 19 which includes the media gateway functionality and signaling gateway functionality integrated together. Therefore, in Fig. 2A the Media GW (116) can be integrated together with GW-VLR (221) and act as one unit within IWF (118B)); receiving the voice stream from the air interface (Fig. 1, elements 114A, 110 and 140, col 11, lines 18-20); and packetizing the voice stream

into RTP data packets (col 3, lines 65-67 and col 4, line 1. A media gateway is disposed between the cellular network portion and the packet-switched network portion for providing a communication path between the two and it would be inherent that since the media gateway is connected to a packet switched network, it would therefore perform the function of packetizing the voice stream from the cellular network for distribution into the packet switched network. Vo et al. discloses a wireless Internet Protocol (WLIP) network system, having a Circuit Switched Network (CSN) wireless portion and a Packet-Switched Network (PSN) VoIP portion (col 9, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to wherein the VoIP Media Gateway is configured for: receiving messages from the Call Control; processing messages from the Call Control; receiving the voice stream from the air interface; and packetizing the voice stream into RTP data packets such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 7, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. teach RTP/RTCP packets (column 9, lines 65 –67, column 10, lines 1 – 13). However, Chow et al. do not disclose explicitly wherein the IP/Ethernet Interface receives RTP data packets from the VoIP Media Gateway and messages from the Call Control and VoIP Signaling Gateway, and sends the RTP data packets and the messages to the packet data network. Vo et al. disclose the limitation of wherein the IP/Ethernet Interface receives RTP

data packets from the VoIP Media Gateway and messages from the Call Control and VoIP Signaling Gateway, and sends the RTP data packets and the messages to the packet data network (Fig. 2A, elements 118B, 206, column 12, lines 23-25 column 14, lines 43-46; Fig. 3A, elements 19, 108, column 18 line 2, line 12. In Fig. 2A IWF (118B) is the IP interface that receives data packets from the VoIP Media Gateway (Fig 3A, element 19) and messages from the Call Control (Fig. 2A, element 206) and VoIP Signaling Gateway (Fig. 3A, element 19) and sends the RTP data packets and messages to the packet data network (Fig. 3A, element 108). Vo et at. discloses a wireless Internet Protocol (WLIP) network system, having a Circuit Switched Network (CSN) wireless portion and a Packet-Switched Network (PSN) VoIP portion (column 9, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include wherein the IP/Ethernet Interface receives RTP data packets from the VoIP Media Gateway and messages from the Call Control and VoIP Signaling Gateway, and sends the RTP data packets and the messages to the packet data network such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 8, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. do not disclose explicitly wherein the IP/Ethernet Interface receives messages and RTP packets from a packet data network, sends the RTP packets to the VoIP Media and signaling gateway. Vo et at. Disclose the limitation of wherein the IP/Ethernet Interface

receives messages and RTP packets from a packet data network (Fig. 2A elements 138, 118B, col 11, lines 36-38) sends the RTP packets to the VoIP Media Gateway (Fig. 2A elements 138, 221 (see Fig 2C where media gateway(11) and signaling gateway(13) are integrated together to form element 221 in IWF(118B) in Fig. 2A), column 11, lines 36-39), and sends the messages to the Call Control and VoIP Signaling Gateway (Fig. 2A, IWF (118B) sends messages to the connected element 206 (CCF)) and VoIP Signaling Gateway (Fig. 2A elements 138, 221 **(see** Fig. 2C where media gateway(11) and signaling gateway(13) are integrated together to form element 221 in Fig. 2A). Note: RTP is inherent as disclosed in Claims 4, 6 and 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include wherein the IP/Ethernet Interface receives messages and RTP packets from a packet data network, sends the RTP packets to the VoIP Media and signaling gateway such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 9, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. do not disclose explicitly wherein the Call Control is configured for: receiving signaling messages from the IP/Ethernet interface and the VoIP Signaling Gateway; and managing mobile station-related activities. Vo et al. disclose the limitation of wherein the Call Control is configured for: receiving signaling messages from the IP/Ethernet interface

and the VoIP Signaling Gateway; and managing mobile station-related activities (Fig. 2C, column 15 lines 39-41, Fig. 2A, elements 299B, 206, 118B, col 12, lines 18-21, lines 23-25, col 14, lines 24-29. The Call Control (206) is connected to the IWF (118B) receiving and processing messages from the Call Control. Fig. 2C shows a gateway 19 including the media gateway functionality and signaling gateway functionality integrated together. Therefore, in Fig. 2A the Media GW (116) can be integrated together with GW-VLR (221) and act as one unit within IWF (118B)). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to wherein the Call Control is configured for: receiving signaling messages from the IP/Ethernet interface and the VoIP Signaling Gateway; and managing mobile station-related activities such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 10, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. do not disclose explicitly wherein the VoIP Signaling Gateway is configured for: receiving messages from the IP/Ethernet interface; instructing the Call Control to manage mobile calls; and managing VoIP call-related activities. Vo et al. disclose the limitation of wherein the VoIP Signaling Gateway is configured for: receiving messages from the IP/Ethernet interface; instructing the Call Control to manage mobile calls; and managing VoIP call-related activities (Fig. 2A, elements 299B, 206, 118B, 221 and 122 , column 12,

lines 18-21, lines 28-30, column 14, lines 24-29. The Call Control (206) handles mobile calls is connected to the IWF (118B) which has the VoIP Signaling Gateway. The GW-VLR entity 221 has the functions of the Mobility Gateway (Signaling Gateway, see Fig. 2B elements 13 and 120) in the IWF (118B) which handles signaling information between the circuit switched network and packet switched network and has a Visitor Location Register (VLR) for maintaining visiting mobile terminal location information. The VoIP entity 122 handles the VoIP traffic (signaling + user data (voice or otherwise)) with one or more associated servers provided in the PSTN infrastructures). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include wherein the VoIP Signaling Gateway is configured for: receiving messages from the IP/Ethernet interface; instructing the Call Control to manage mobile calls; and managing VoIP call-related activities such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 11, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. do not disclose explicitly wherein the VoIP Media Gateway is configured for: receiving the VoIP data packets from the IP/Ethernet Interface; and converting the VoIP data packets to a voice stream. Vo et al. disclose the limitation of wherein the VoIP Media Gateway is configured for: receiving the VoIP data packets from the IP/Ethernet Interface; and converting the VoIP data packets to a voice stream (Fig. 2A, elements 108, 118B, 138, 221,

298, 204, column 12, lines 18-31. The VoIP data packets is received from VoIP network (108), connected via path 138 to IWF (118B) where it is converted into voice stream (example shown in Fig. 1 element 140, col 11, lines 18-20) for transfer to RNC (204) coupled to ANSI-136 path 298). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include wherein the VoIP Media Gateway is configured for: receiving the VoIP data packets from the IP/Ethernet Interface; and converting the VoIP data packets to a voice stream such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding Claim 12, Chow et al. disclose the limitation of a software radio port device for processing Voice over IP (VoIP) data packets for wireless terminals (recited "Intelligent Broadband Access point (IBAP)" as software radio port, Fig. 9, column 32, lines 30 – 47). Chow et al. do not disclose explicitly wherein the Air Interface receives a voice stream from the VoIP Media Gateway and receives signaling messages from the Call Control. Vo et al. discloses wherein the Air Interface (recited "ANSI-136 air interface" as Air Interface) receives a voice stream from the VoIP Media Gateway (recited "handles the VoIP traffic" as receive a voice stream from the VoIP Media Gateway, column 11, lines 2 – 8) and receives signaling messages from the Call Control (Fig. 2A elements 118B, 221, 206, 298, 204, column 12, lines 1-5; column 14, lines 23-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include a wherein the Air Interface receives a voice stream from the VoIP Media Gateway and receives signaling messages from the Call Control such as that taught by Vo et al. in order to provide

wireless telephony over a packet-switched network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Regarding claim 14, Chow et al. disclose the limitation of a system of claimed wherein the network server platform (Fig. 1, element 108, Network Server Platform (NSP); column 8, lines 57 – 67) comprises: an IP interface (Fig. 1, the interconnection between the element 106, packet network and element 108 network server platform); However, Chow et al. do not disclose explicitly a Mobile Switching Center/Visitor's Location Register (MSC/VLR) configured to provide call control operations for mobiles; a Home Location Register (HLR) for storing mobile subscriber authentication data); and a VoIP Call-Server Control to provide VoIP call processing control operations. Vo et al. disclose the limitation of a Mobile Switching Center/Visitor's Location Register (MSC/VLR) configured to provide call control operations for mobiles (Fig. 2A, element 118B, IWF as MSC/VLR, column 12, lines 18 – 30); a Home Location Register (HLR) for storing mobile subscriber authentication data (recited "HLR interface for determining the address" as subscriber authentication data; Fig. 2A, element 295 HLR, column 5, lines 8 – 18); and a VoIP Call-Server Control to provide VoIP call processing control operations (recited "VoIP Proxy" as VoIP Call-Server Control ; Fig. 2A, element 122 VoIP Proxy, column 3, lines 1 – 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chow et al. to include a Mobile Switching Center/Visitor's Location Register (MSC/VLR) configured to provide call control operations for mobiles; a Home Location Register (HLR) for storing mobile subscriber authentication data); and a VoIP Call-Server Control to provide VoIP call processing control operations such as that taught by Vo et al. in order to provide wireless telephony over a packet-switched

network such as, for example, a network using the Internet Protocol (IP) (as suggested by Vo et al., see column 1, lines 23 – 25).

Allowable Subject Matter

9. Claims 47, 48 are allowed over prior art.

10. Claims 27, 38, 39, 42, 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed on 4/25/2006 with respect to claims 1 – 44, 47 – 48 have been fully considered but they are not persuasive.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL

May 26, 2006

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER